

Introduction

RCT-3000 Flex Current Sensor is made according to the principle of Rogowski Coil. It can work with oscilloscope and multimeter or work as a current sampler in some online test instruments. The BNC cable enclosed in this product is to connect with oscilloscope or multimeter.

The Flex Current Sensor is used in the special spots where the ordinary test instruments is difficult to use. It is flexible in narrow space, such as crowded lines, Aluminum /Cooper Wires, and mains current test. This Flex Current Sensor uses special flexible material as the framework, and is processed in special crafts. The phase error is small, the accuracy is high and the range is wide.




Picture 1 Make up



Picture 2 Integrator

The Flex Current Sensor consists of the Rogowski Coil, the Integrator and BNC cable. See Picture 1. The Coil is used to acquire current signal 2. The Integrator is to do the integration on the sampled signal and output the voltage signal. 3. The BNC cable is to connect the Integrator with external measurement instrument.

The panel of the Integrator : see Picture 2. 01- BNC output; 02-Working Light: Keeping green after power on indicates the normal working status; 03-Low Battery Indicator: Red color stands for the low battery; 04-Power on, the lower step OFF is for power off, the middle  means there is the output signal but there is no display, the upper **A** means that the integrator has the output signal and there is the display to show the RMS current value of the object; 05-Hold: press to hold the current displayed, and press again to unlock the hold function; 06- the housing of the integrator; 07-Output/current ranges in 3 steps; 03-current display ; 09-the input cable into the integrator(the output cable from the coil)

Features:

- Wide application: flexible material , convenient to test the conductor current in various status.
- Fast response, No magnetic-saturation, Good accuracy, Small Phase error.
- Wide current range: 10mA~1MA
- Wide frequency range, 2Hz~2MHz, can measure harmonic wave.
- The output terminal is easy for connection with oscilloscope, multimeter, power meter, and other online monitoring instrument.
- Current range is in 3 steps. Accuracy $\pm 1\%$;

- Safe to use: No danger of second-time open circuit and overload like normal current clamp, especially safe for large current.
- The coil length and output voltage can be custom-made.

Specification

Coil length: 400mm, 600mm, 1000mm (other special length is available)

Output: 1mV/A 5mV/A 10mV/A 50Hz(the output accuracy of the integrator can be custom-made)

Accuracy: 0.5%

Current Range: 0.5A—2MA Bandwidth: ≤ 2 MHz

Integrator Working Voltage:

B type: 3 pcs AA size battery or AC /DC adaptor

A type: 1pc of 6F22- 9V battery

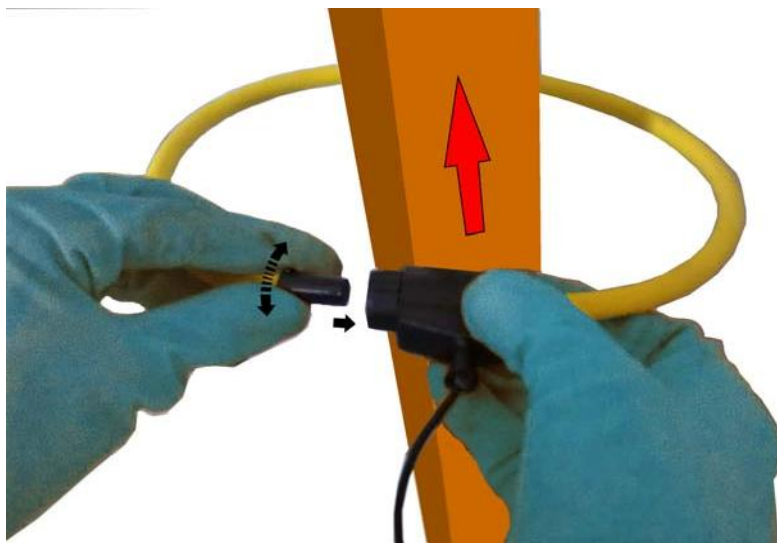
Integrator Size: (H) 112mm×(W) 72mm×(D) 36mm

Safety Standard: EN61010-1+A2

EMC:EN 61326-1:1997+A1:1998

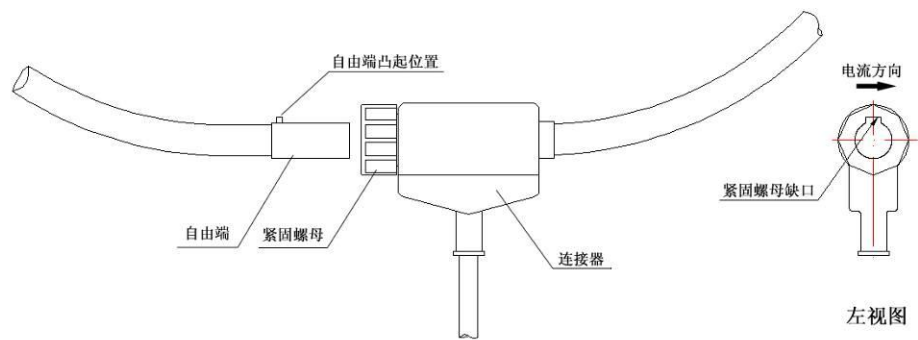
Operation

See Picture 3. According to the current direction of the test conductor, let the free end of the coil circle the object. Turn the free end to make the convex aligned with the notch of the fixing nut of the connector and insert the free end; when it recovers to free status, it is locked. Connect one end of the BNC cable to the output terminal of the integrator and the other end to a measuring instrument. Turn on the power of the integrator, it goes into working status.



Picture 3 The installation of the coil

After the test, turn off the power of the integrator, turn the convex of the free end to be aligned with the notch of the fixing nut, turn and get the coil out. See Picture 4



Picture 4 The installation and uninstallation of the coil

Note: Please wear insulation gloves upon installation and uninstallation!

Battery Replacement: If the battery indicator is lighting, please replace the batteries in time.